AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A peptide ~~having a sequence of amino acids~~ consisting of an amino acid sequence DYDY which is identical to a sequence of consecutive amino acids found within amino acids 695 to 698 (SEQ ID NO. 10) of the human blood clotting factor Va.

2. (Original) The peptide of claim 1 wherein the peptide exhibits an IC_{50} of less than about 100 μM, the IC_{50} being the amount of the peptide that inhibits 50% of the activity of human factor Va.

3. (Original) The peptide of claim 2 wherein the peptide exhibits an IC_{50} of less than about 15 μM.

4. (Original) The peptide of claim 3 wherein the peptide exhibits an IC_{50} of about 1.6 μM.

5. (Original) The peptide of claim 4 wherein the peptide exhibits an IC_{50} of about 500 nM.

6. (Cancelled).

7. (Cancelled).

8. (Original) A pharmaceutical composition comprising the peptide of claim 1.

Claim 9 (Canceled)

10. (Original) A peptide analogue that mimics the peptide of claim 1.

Claims 11-42 (Canceled)

43. (Original) A pharmaceutical composition adapted for inhibiting thrombin generation, the composition comprising a peptide including an amino acid sequence DYDY (SEQ ID NO. 10).

44. (Original) The pharmaceutical composition of claim 43 further comprising a carrier.

45. (Original) The pharmaceutical composition of claim 43 wherein one of the Y amino acids of the amino acid sequence is sulfonated.

46. (Original) The pharmaceutical composition of claim 45 wherein the amino acid sequence of the peptide is DY(-SO_3)DY.

47. (Original) The pharmaceutical composition of claim 45 wherein the amino acid sequence of the peptide is DYDY(-SO_3).

48. (Original) The pharmaceutical composition of claim 43 wherein both of the Y amino acids of the amino acid sequence are sulfonated.

49. (Original) The pharmaceutical composition of claim 48 wherein the amino acid sequence of the peptide is DY(-SO_3)DY(-SO_3).

Claim 50 (Canceled)

51. (Original) A pharmaceutical composition comprising a peptide analogue that mimics the peptide of the composition of claim 43.

Claims 52-111 (Canceled)

112. (Currently Amended) A peptide for direct binding to thrombin, the peptide consisting of a sequence of four amino acids which is identical to a sequence of consecutive amino acids found within amino acids 695 to 698 DYDY (SEQ ID NO. 10) of the human blood clotting factor Va.

113. (Currently Amended) The peptide of claim 112 wherein the peptide ~~comprises~~ consists of the amino acid sequence DYDY.

114. (Previously Presented) A pharmaceutical composition comprising the peptide of claim 112.

115. (Previously Presented) A peptide analogue that mimics the peptide of claim 112.

116. (Previously Presented) A peptide consisting of a sequence of five amino acids which is identical to a sequence of consecutive amino acids found within amino acids 695 to 699 DYDYQ (SEQ ID NO. 11) of the human blood clotting factor Va.

117. (Previously Presented) The peptide of claim 116 wherein the peptide consists of the amino acid sequence DYDYQ.

118. (Previously Presented) A pharmaceutical composition comprising the peptide of claim 116.

119. (Previously Presented) A peptide analogue that mimics the peptide of claim 116.

120. (Previously Presented) A pharmaceutical composition adapted for inhibiting thrombin generation, the composition comprising a peptide consisting of an amino acid sequence DYDY (SEQ ID NO. 10).

121. (Previously Presented) The pharmaceutical composition of claim 120 further comprising a carrier.

122. (Previously Presented) The pharmaceutical composition of claim 120 wherein one of the Y amino acids of the amino acid sequence is sulfonated.

123. (Previously Presented) The pharmaceutical composition of claim 122 wherein the amino acid sequence of the peptide is DY(-SO_3)DY.

124. (Previously Presented) The pharmaceutical composition of claim 122 wherein the amino acid sequence of the peptide is DYDY(-SO_3).

125. (Previously Presented) The pharmaceutical composition of claim 120 wherein both of the Y amino acids of the amino acid sequence are sulfonated.

126. (Previously Presented) The pharmaceutical composition of claim 125 wherein the amino acid sequence of the peptide is DY(-SO_3)DY(-SO_3).

127. (Previously Presented) A pharmaceutical composition comprising a peptide analogue that mimics the peptide of the composition of claim 120.

128. (Previously Presented) A pharmaceutical composition adapted for inhibiting thrombin generation, the composition comprising a peptide consisting of an amino acid sequence DYDYQ (SEQ ID NO. 11).

129. (Previously Presented) The pharmaceutical composition of claim 128 further comprising a carrier.

130. (Previously Presented) The pharmaceutical composition of claim 128 wherein one of the Y amino acids of the amino acid sequence is sulfonated.

131. (Previously Presented) The pharmaceutical composition of claim 130 wherein the amino acid sequence of the peptide is DY(-SO_3)DYQ.

132. (Previously Presented) The pharmaceutical composition of claim 130 wherein the amino acid sequence of the peptide is DYDY(-SO_3)Q.

133. (Previously Presented) The pharmaceutical composition of claim 128 wherein both of the Y amino acids of the amino acid sequence are sulfonated.

134. (Previously Presented) The pharmaceutical composition of claim 133 wherein the amino acid sequence of the peptide is DY(-SO_3)DY(-SO_3)Q.

135. (Previously Presented) A pharmaceutical composition comprising a peptide analogue that mimics the peptide of the composition of claim 128.

136. (New) A peptide for direct binding to thrombin, the peptide consisting of an amino acid sequence DYDYQ which is identical to a sequence of consecutive amino acids found within amino acids 695 to 699 (SEQ ID No. 11) of the human blood clotting factor Va.

137. (New) The peptide of claim 136 wherein the peptide exhibits an IC_{50} of less than about 100 μM, the IC_{50} being the amount of the peptide that inhibits 50% of the activity of human factor Va.

138. (New) The peptide of claim 137 wherein the peptide exhibits an IC_{50} of less than about 15 μM.

139. (New) The peptide of claim 138 wherein the peptide exhibits an IC_{50} of about 1.6 μM.

140. (New) The peptide of claim 139 wherein the peptide exhibits an IC_{50} of about 500 nM.

141. (New) A pharmaceutical composition comprising the peptide of claim 136.

142. (New) A peptide analogue that mimics the peptide of claim 136.